

Recombinant Human Bone Morphogenetic Protein 3 (Human BMP-3)

Product Information

Product Name	Cat#	Size
Recombinant Human Bone Morphogenetic Protein 3 (Human BMP-3)	92052ES10	10 µg
	92052ES60	100 µg
	92052ES76	500 µg

Product Description

BMP-3, also known as osteogenin, the most abundant BMP in adult bone, is one of at least 15 structurally and functionally related BMPs, which are members of the TGF-beta superfamily. BMPs were originally identified as protein regulators of cartilage and bone formation. They have since been shown to be involved in embryogenesis and morphogenesis of various tissues and organs. BMPs also regulate the growth, differentiation, chemotaxis, and apoptosis of various cell types. Similar to most other TGF-beta family proteins, BMPs are highly conserved across animal species. At the amino acid sequence level, mature human and rat BMP-3 are 98% identical. BMP-3 is synthesized as a large precursor protein that is cleaved at the dibasic cleavage site (RXXR) to release the carboxy-terminal domain. Biologically active BMP-3 is a disulfide-linked homodimer of the carboxy-terminal 110 amino acid residues that contains the characteristic seven conserved cysteine residues involved in the formation of the cysteine knot and the single interchain disulfide bond. The role of BMP-3 in bone is contradictory since, unlike osteogenin purified from bone, recombinant BMP-3 has not shown osteogenic function.

Product Properties

Synonyms	ARAP, Midgestation and Kidney Protein, Neurite Outgrowth-promoting Factor 2, Neurite Outgrowth-promoting Protein
Accession	P12645.1
GeneID	651
Source	E.coli-derived Human BMP-3, Gln363-Arg472.
Molecular Weight	Approximately 24.8 kDa.
AA Sequence	QWIEPRNCAR RYLKVDFAI GWSEWIISPK SFDAYYCSGA CQFPMPKSLK PSNHATIQSI VRAVGVVPGI PEPCCVPEKM SLSILFFDE NKNVVLKVYP NMTVESCACR
Tag	None
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	> 95% by SDS-PAGE and HPLC analyses.
Biological Activity	The ED ₅₀ as determined by its ability to inhibit BMP-2-induced activity in murine MC3T3-E1 cells. Fully biologically active when compared to standard.
Endotoxin	< 1.0 EU per 1µg of the protein by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 30% Acetonitrile and 0.1% TFA.

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom.

Reconstitution

Reconstitute in 4 mM HCl to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at $\leq -20^{\circ}\text{C}$. Further dilutions should be made in appropriate buffered solutions.

Shipping and Storage

The products are shipped with ice pack and can be stored at -20°C to -80°C for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

Cautions

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only!